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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,130	04/16/2004	Ken Whatmough	42783-0051	7995

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EXAMINER	
CHU, DAVID H	
ART UNIT	**PAPER NUMBER**
2628	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/825,130	WHATMOUGH, KEN	
	Examiner	Art Unit	
	David H. Chu	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 October 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,3-11,14,16 and 18-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-11,14,16 and 18-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 April 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/26/2007 has been entered.

Claim Rejections - 35 USC § 112

2. The rejection to claim 3 of the previous office action, is **withdrawn** in light of the applicant's amendment.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3, 4-5, 11, 14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Probets (Document Engineering Lab, http://www.eprg.org/research/SVG/flash2svg/ & http://www.eprg.org/research/SVG/flash2svg/swfformat.php) in view of Isaacs (U.S. Patent No. 5,894,308), in view of W3C (W3C, http://www.w3.org/TR/SVGMobile/), and further in view of Kidokoro et al. (PGPUB Document No. US 2003/0103250).

3. Note with respect to claim 1,

4. Probets teaches:

- Converting the graphic object data defining the vector graphics object from an edge record based format to a path format, the edge record based format including a plurality of edge records each defining an edge of the graphic object, the edge records including information associating the defined edges with fill styles that the edges border against

  [*Probets teaches the creation of SVG paths and groups from the shape and vector information contained in the SWF file (Document Engineering Lab..Flash and SVG: "File*

Conversion"). The shapes of the SWF file are defined by a series of moveto, lineto and curveto operations with associated fill and stroke colors and patterns.

Further, Probets includes a sample code that is the equivalent to the ***edge record format*** *disclosed by the applicant (Document Engineering Lab, Semantics of Macromedia's Flash (SWF) Format and its Relationship to SVG: "Tags, Shapes and Frames")*]

- The path format including path elements that are each associated with a fill style and define one or more polygon shapes at least partially filled with the associated fill style, the path elements collectively defining the graphic object

[*As discussed above Probets teaches the path format being a SVG format file.*]

5. However, Probets does not expressly teach:

- Converting the graphic object data from the path format to a second format

The conversion including:

  - Redefining the polygon shapes defined by the path elements as groups of triangles
  - Combining at least some triangles in the groups of triangles into further polygon shapes that fall within complexity thresholds

6. Isaacs teaches:

- Converting the graphic object data from the path format to a second format

The conversion including:

  - Redefining the polygon shapes defined by the path elements as groups of triangles

[*Converting the 3D model into polygons of different shape (not only triangles)*]

(Isaacs, col. 1, line 20-24)

- Combining at least some triangles in the groups of triangles into further polygon shapes that fall within complexity thresholds

[*The method of reducing the number of polygons in a 3D object (col. 7, line 13-27), wherein the 3D object is converted in triangle form (col. 5, line 57-67).*
Further, one of the methods taught by Isaacs teaches reducing the number of polygons according to the length of edges of the triangles, wherein the length of a triangle serve as a threshold (col. 8, line 22-36) (col. 6, line 53-65). As shown in FIGS. 8a - 8b, it is clear that the smaller triangles on the left of FIG. 8a are combined and redefined as the corresponding bigger triangles of FIG 8b.
Note further, Isaacs teaches, in admitted art that a more realistic rendering of the 3D object by filling in the polygons with various colors (col. 1, line 20-25)]

7. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the simplifying an polygon model by combining triangles teaching of Isaacs to the converted SVG path format, ***because this will allows optimizing the number of polygons of a model without resulting in unpredictable degradation in image quality***.

(Isaacs, col. 2, line 7-11)

8. Note further, the combined teachings of Probets and Isaacs does not expressly teach:

- Transmitting the converted vector graphics object in the second format to the wireless device over the wireless communication network for display thereon

9. W3C teaches:

- Transmitting the converted vector graphics object in the second format to the wireless device over the wireless communication network for display thereon

[*SVG Tiny and Basic that are specifically used in mobile phones and PDA (W3C, "Mobile SVG Profiles: SVG Tine and SVG Basic")*

Further, It is well known in the art to send data over a wireless communication link to a mobile phone and a PDA. Cell phones and PDA devices are frequently used to receive data. Therefore, it would have been obvious to transmit data of Isaacs to a wireless device over a wireless network.]

10. Therefore, it would have been obvious to one of an ordinary skill in the art to apply SVG Profiles teachings that are specific for mobile phone and PDA, and send data over a wireless communications link to the combined teachings of Probets and Isaacs, because ***this will allows the user receiving/sending data to their PDA or mobile phone and allows this allows sending and receiving information to any device without being constrained to location and time***.

11. And further, the combined teachings of Probets, Isaacs and W3C does not expressly teach:

- The complexity threshold being based on predetermined capabilities of a wireless device

12. Kidokoro et al. teaches:

- Performing image processing according to the determined capability of the client terminal device and transfer the image data

[Kidokoro et al., 0011]

13. Therefore, it would have been obvious to one of an ordinary skill in the art determine the capability of a client device for image processing and transfer, as taught by Kidokoro et al., when sending the converted image format to a wireless device, as taught by Probets, Isaacs and W3C, because ***this will allow efficient rendering of images on a display device without exceeding the capabilities of said device.***

14. Note with respect to claim 3,

15. Probets teaches:

For the process of converting an SWF file to SVG, the steps of identifying each vertex, edges and the fill style associated herewith (Document Engineering Lab, "Semantics of Macromedia's Flash (SWF) Format and its Relationship t SVG", Section: "Tags, Shapes and Frames").

16. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the SWF-to-SVG conversion teachings to the 3D object-to-Triangle form teachings of Isaacs, because this will allow the conversion of 2D objects for added range of sources files for polygon reduction.

17. Note with respect to claims 4 and 5,

18. Probets teaches a **SVG format** and a **flash file format** as discussed above with respect to claim rejection 3.

19. Note with respect to claim 6, claim 6 is similar in scope to the claim 1, thus the rejections to claim 1 hereinabove are also applicable to claim 6.

[The reduced polygon shape as taught by Isaacs above comprise of edges that define said polygon shape]

20. Note with respect to claim 7,

Isaacs teaches:

- The different types of thresholds for reducing the number of polygons (Isaacs, col. 7, line 9-20)

21. Further, the triangles and triangles after polygon reduction of Isaacs inherently have **continuous interior fill style region without internal island contours**.

22. However, Isaacs does note expressly teach:

- The further polygons each have a continuous interior fill style region without internal island contours according to **complexity threshold**

23. As discussed above Kidokoro et al. teaches the complexity threshold of a viewing device.

24. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the determining the capability of a client device teaching of Kidokoro et al. to the 3D object-to-Triangle form teachings of Isaacs, because ***this allows efficient rendering of images on a display device without exceeding the capabilities of said device***.

25. Note with respect to claim 8,

26. Isaacs teaches:

- The different types of thresholds for reducing the number of polygons (Isaacs, col. 7, line 9-20)

27. Further, the triangles and triangles after polygon reduction of Isaacs inherently only have **convex vertices**.

28. However, Isaacs does note expressly teach:

- The further polygons each have only convex vertices according to **complexity threshold**

29. As discussed above Kidokoro et al. teaches the complexity threshold of a viewing device.

30. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the determining the capabilities of a client terminal teaching of Kidokoro et al. to the 3D object-to-Triangle form teachings of Isaacs, because ***this allows efficient rendering of images on a display device without exceeding the capabilities of said device***.

31. Note with respect to claim 9,

32. Isaacs teaches:

- The different types of thresholds for reducing the number of polygons (Isaacs, col. 7, line 9-20)

33. Further, the triangles and triangles after polygon reduction of Isaacs inherently have **under a predetermined number of sides**, as the polygons are always in triangle form.

34. However, Isaacs does note expressly teach:

- The further polygons each have under a predetermined number of sides according to **complexity threshold**

35. As discussed above Kidokoro et al. teaches the complexity threshold of a viewing device.

36. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the the capabilities of a client terminal teaching of Kidokoro et al. to the 3D object-to-Triangle form teachings of Isaacs, because ***this allows efficient rendering of images on a display device without exceeding the capabilities of said device***.

37. Note with respect to claim 10,

38. Isaacs teaches:

- The different types of thresholds for reducing the number of polygons (Isaacs, col. 7, line 9-20)

39. Further, each of the triangles and triangles after polygon reduction of Isaacs inherently are **simple polygons**.

40. However, Isaacs does note expressly teach:

- Each of the further polygons being simple polygons according to **complexity threshold**

41. As discussed above Kidokoro et al. teaches the complexity threshold of a viewing device.

42. Therefore, it would have been obvious to one of an ordinary skill in the art to apply the capabilities of a client terminal teaching of Kidokoro et al. to the 3D object-to-Triangle form teachings of Isaacs, because this ***allows efficient rendering of images on a display device without exceeding the capabilities of said device***.

43. Note with respect to claim 16, refer to claim rejections 1 and 7-10 discussed above.

44. Note with respect to claim 11, claim 11 is similar in scope to the claims 1 and 3, thus the rejections to claims 1 and 3 hereinabove are also applicable to claim 11.

45. Note with respect to claim 14, refer to claim rejection 1 discussed above.

46. Further Isaacs teaches:

- A computer system (FIG. 1), wherein the Polygon Reduction Editor is a component of the system

47. Note with respect to claim 17, refer to claim rejection 1 discussed above.

[*Further, Isaacs teaches a Polygon Reduction Editor*]

48. Note with respect to claims 19-22, claims 19-22 are similar in scope to the claims 1, 4 and 5, thus the rejections to claims 1, 4 and 5 hereinabove are also applicable to claims 19-22.

Response to Arguments

49. Applicant's arguments, see pg 10-12, filed 10/26/2007, with respect to the rejection(s) of claim(s) 1, 11, 14 and 17 under 35 USC 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Probets (Document Engineering Lab, http://www.eprg.org/research/SVG/flash2svg/ & http://www.eprg.org/research/SVG/flash2svg/swfformat.php) in view of Isaacs (U.S. Patent No. 5,894,308), in view of W3C (W3C, http://www.w3.org/TR/SVGMobile/), and further in view of Kidokoro et al. (PGPUB Document No. US 2003/0103250)

50. The following applicant's arguments filed 10/26/2007 have been fully considered but they are not persuasive.

Following are the applicant's arguments and examiner's response.

51. The applicant argues:

- The 3D object model of Isaacs does not comprise of polygon shapes defined by ... path elements. A 3D model defined by polygons is not the equivalent to vector graphics

[*The applicant does not disclose, in definitive terms, the definition of vector graphic.*

Therefore, given the broadest reasonable interpretation of the claims, the Examiner considers anything that is defined by edges/polygons is a vector graphic.

Further, the Examiner used the Isaacs reference for the simplifying a polygon model by combining triangles according to a threshold teaching. As stated in the previous action, the benefit of applying Isaac's method of "combining at least some triangles in the groups of triangles into further polygon shapes that fall within complexity thresholds" to the converted SVG path format (which also is in polygon form) is because it allows optimizing the number of polygons of a model without resulting in unpredictable degradation in image quality. As such, the Isaac reference suggests carrying out said "combing" and "redefining" process to the path elements (which are also type of polygons as taught in Isaacs)]

- Isaacs is concerned with the 3D modeling and not 2D vector graphic file formats. Therefore, Isaacs is not analogous art

[*Combining the triangles of the 3D vector graphic file (polygons constructing a 3D model) is in the same field of endeavor as combining the 2D vector graphic files as recited by the applicant. A 2D vector graphic file is a simplified geometry form of a 3D vector graphic file*]

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David H. Chu whose telephone number is (571) 272-8079. The examiner can normally be reached on M-TH 9:00am - 7:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark k. Zimmerman can be reached on (571) 272-7653. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DHC

RYAN YANG 12/24/07
PRIMARY EXAMINER